



State of Utah

Department of  
Environmental Quality

Richard W. Sprott  
*Executive Director*

DIVISION OF AIR QUALITY  
Cheryl Heying  
*Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY HERBERT  
*Lieutenant Governor*

DAQE-IN0140940004-07

December 11, 2007

Chris Faulhaber  
Environmental Manager  
Granite Construction Company  
1000 North Warm Springs Road  
Salt Lake City, Utah 84116

Dear Mr. Faulhaber:

Re: Intent to Approve: Aggregate and Asphalt Processing Plant  
Tooele County – CDS B; ATT; NSPS; HAPs; Title V MINOR  
Project Code: N014094-0004

The attached document is the Intent to Approve (ITA) for the above-referenced project. ITAs are subject to public review. Any comments received shall be considered before an Approval Order is issued.

Future correspondence on this Intent to Approve should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. Alan Humpherys. He may be reached at (801) 536-4142.

Sincerely,

John T. Blanchard, Manager  
Minor New Source Review Section

JTB:AH:sa

cc: Tooele County Health Department

**STATE OF UTAH**

**Department of Environmental Quality**

**Division of Air Quality**

**INTENT TO APPROVE: Aggregate and Asphalt  
Processing Plant**

**Prepared By: Alan Humpherys, Engineer  
(801) 536-4142  
Email: [ahumpherys@utah.gov](mailto:ahumpherys@utah.gov)**

**INTENT TO APPROVE NUMBER**

**DAQE-IN0140940004-07**

**Date: December 11, 2007**

**Granite Construction Company**

**Source Contact  
Chris Faulhaber  
(801) 526-6047**

**M. Cheryl Heying  
Executive Secretary  
Utah Air Quality Board**

## *Abstract*

*Granite Construction Company has submitted a Notice of Intent (NOI) to operate an aggregate and asphalt processing plant located at the Dugway Proving Grounds in Tooele County. The aggregate and asphalt plant were part of a portable source, and Granite Construction Company has decided to make it a permanent source. The aggregate plant will produce 500,000 tons per year, and the asphalt plant will produce 300,000 tons per year.*

*This Approval Order (AO) is issued to Granite Construction Company for the purpose of operating a facility that belongs to the non-metallic mineral processing industry, including aggregate processing and asphalt processing plants. Compliance with the opacity limits and various operating practices listed in the conditions of the AO shall be considered as application of Best Available Control Technology (BACT). The terms and conditions of this AO are enforceable by both the State of Utah and the Federal Government.*

*That area of Tooele County is an attainment area of the National Ambient Air Quality Standards (NAAQS) for all pollutants. New Source Performance Standards (NSPS) Subpart A, Subpart I (Standards of Performance for Hot Mix Asphalt Facilities), and Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) apply to this source. National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Achievable Control Technology (MACT) regulations do not apply to this source. Title V of the 1990 Clean Air Act applies to this source; however, this source does not require a Title V Operating Permit.*

*The emissions, in tons per year, will be as follows:  $PM_{10} = 9.38$ ,  $NO_x = 29.76$ ,  $SO_2 = 8.72$ ,  $CO = 25.28$ ,  $VOC = 7.68$ ,  $HAPs = 0.01$ .*

The NOI for the above-referenced project has been evaluated and has been found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). Air pollution producing sources and/or their air control facilities may not be constructed, installed, established, or modified prior to the issuance of an AO by the Executive Secretary of the Utah Air Quality Board.

A 30-day public comment period will be held in accordance with UAC R307-401-7. A notice of intent to approve will be published in the Tooele Transcript on December 13, 2007. During the public comment period the proposal and the evaluation of its impact on air quality will be available for both you and the public to review and comment. If anyone so requests a public hearing, it will be held in accordance with UAC R307-401-7. The hearing will be held as close as practicable to the location of the source. Any comments received during the public comment period and the hearing will be evaluated.

Please review the proposed AO conditions during this period and make any comments you may have. The proposed conditions of the AO may be changed as a result of the comments received. Unless changed, the AO will be based upon the following conditions:

### **General Conditions:**

1. This AO applies to the following company:

#### Site Office

Granite Construction Company  
South of Stark Road, South of Dugway  
Dugway, UT; Tooele County

#### Corporate Office Location

Granite Construction Company  
1000 North Warm Springs Road  
Salt Lake City, UT 84402

Phone Number (801) 526-6047

Fax Number (801) 526-6091

The equipment listed in this AO shall be operated at the following location:

Proceed on Highway 199. Highway 199 turns into Stark Road in Dugway, Utah. On Stark Road, proceed west past the Frank Skull Golf Course. Turn south on main road past Valdez Cir. Proceed south for approximately 2 miles. Arrive at Granite Construction Company Aggregate and Asphalt Plant.

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27  
4,449.7 kilometers Northing, 351.9 kilometers Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the UAC R307 and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.
3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.
4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be reviewed and approved in accordance with R307-401.
5. All records referenced in this AO or in applicable NSPS, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request. Records shall be kept for the following minimum periods:
  - A. Used oil consumption Three years
  - B. Emission inventories Five years from the due date of each emission statement or until the next inventory is due, whichever is longer
  - C. All other records Two years
6. Granite Construction Company shall install and operate the non-metallic mineral processing plants (aggregate and asphalt plants), and shall conduct its operations of the non-metallic mineral processing plants (aggregate and asphalt plants) in accordance with the terms and conditions of this AO, which was written pursuant to Granite Construction Company's NOI submitted to the Division of Air Quality (DAQ) on October 30, 2007 and additional information received on November 28, 2007.
7. The approved installations shall consist of the following equipment or equivalent\*:
  - A. One (1) Jaw Crusher  
Size: 30" x 42"  
Capacity: 600 tons per hour (tph)

- B. One (1) Standard Cone Crusher, 400 tph  
Size: 54"  
Capacity: 400 tph
- C. Two (2) Fine Head Cone Crushers, 250 tph each  
Size: 54"  
Capacity: 250 tph
- D. Three (3) Three Deck Screens  
Size: 6' x 20'
- E. One (1) Lime Silo  
Capacity: 25 Tons
- F. One (1) Asphalt Silo  
Capacity: 100 Tons
- G. One (1) Pugmill
- H. Two (2) Asphalt Tanks,  
Capacity: 30,000 gallons each
- I. Associated conveyors, scalping screen, front end loaders, dozers, bulldozers,  
haul/dump trucks, backhoe, and water trucks
- J. One (1) Rotary Dryer  
Fuel Type                                      Used Oil
- K. One (1) 1,250 kW Generator  
Fuel Type                                      Diesel
- L. One (1) 100 kW Generator  
Fuel Type                                      Diesel

\* Equivalency shall be determined by the Executive Secretary.

- 8. Equipment listed above can be replaced by other equipment of equal or lesser production capacity having the same function as the existing equipment with written notification to the Executive Secretary, and adherence to the following DAQ "Replacement in Kind" provision (R307-401-11):

- A. Potential to emit of the replacement equipment is the same or lower;
- B. Horse power rating or rated capacity of replacement equipment remains the same or lower;
- C. Number of emission points or emitting units is the same or lower;
- D. No additional types of air contaminants are emitted as a result of the replacement.

Additional information is required if replacement equipment is subject to an NSPS standard.

9. Granite Construction Company shall notify the Executive Secretary in writing when the installation of the equipment listed in Condition #7 has been completed and is operational. To insure proper credit when notifying the Executive Secretary, send your correspondence to the Executive Secretary, attn: Compliance Section.

If the construction and/or installation has not been completed within eighteen months from the date of this AO, the Executive Secretary shall be notified in writing on the status of the construction and/or installation. At that time, the Executive Secretary shall require documentation of the continuous construction and/or installation of the operation and may revoke the AO in accordance with R307-401-18.

### **Limitations and Tests Procedures**

10. The asphalt plant exhaust stacks shall vent vertically unrestricted at a height no less than 37 feet, as measured from ground level.
11. Emissions to the atmosphere at all times from the indicated emission point shall not exceed the following rates and concentrations:

#### Hot Mix Asphalt Plant

- A. Concentrations in the exhaust stream from the rotary dryer shall not exceed 0.024 grains/dscf for pit run material for PM<sub>10</sub>, and 0.028 grains/dscf for recycled pit run asphalt pavement mix for PM<sub>10</sub>.
12. Stack testing to show compliance with the emission limitations stated in the above condition shall be performed as specified below:

A.	<u>Emissions Point</u>	<u>Pollutant</u>	<u>Testing Status</u>	<u>Test Frequency</u>
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Rotary Dryer exhaust passing through Baghouse	PM <sub>10</sub> .....	* .....	#
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- B. Testing Status

\* Initial compliance testing is required. The initial test date shall be performed as soon as possible and in no case later than 180 days after the start up of a new emission source, an existing source without an AO, or the granting of an AO to an existing emission source that has not had an initial compliance test performed. If an existing source is modified, a compliance test is required on the modified emission point that has an emission rate limit.

# Test every 5 years. The Executive Secretary may require testing at any time.

C. Notification

At least 30 days prior to conducting any emission testing required under any part of UAC, R307, the owner or operator shall notify the Executive Secretary of the date, time and place of such testing and, if determined necessary by the Executive Secretary, the owner or operator shall attend a pretest conference. A source test protocol shall be submitted to DAQ when the testing notification is submitted to the Executive Secretary. The source test protocol shall be approved by the Executive Secretary prior to performing the test(s). The source test protocol shall outline the proposed test methodologies, stack to be tested, and procedures to be used. A pretest conference shall be held, if directed by the Executive Secretary. The pretest conference shall include representation from the owner/operator, the tester, and the Executive Secretary. The emission point shall be designed to conform to the requirement of 40 CFR 60, Appendix A, Method 1, or other methods as approved by the Executive Secretary. An Occupational Safety and Health Administration (OSHA) or Mine Safety and Health Administration (MSHA) approved access shall be provided to the test location.

D. PM<sub>10</sub>

For stacks in which no liquid drops are present, the following methods shall be used: 40 CFR 51, Appendix M, Methods 201, 201a, or other testing methods approved by the Executive Secretary. The back half condensibles shall also be tested using the method specified by the Executive Secretary. All particulate captured shall be considered PM<sub>10</sub>.

For stacks in which liquid drops are present, methods to eliminate the liquid drops should be explored. If no reasonable method to eliminate the drops exists, then the following methods shall be used: 40 CFR 60, Appendix A, Method 5, 5a, 5d, or 5e as appropriate, or other testing methods approved by the Executive Secretary. The back half condensibles shall also be tested using the method specified by the Executive Secretary. The portion of the front half of the catch considered PM<sub>10</sub> shall be based on information in Appendix B of the fifth edition of the EPA document, AP-42, or other data acceptable to the Executive Secretary.

The back half condensibles shall not be used for compliance demonstration but shall be used for inventory purposes.

E. New Source Operation

For a new source/emission point, the production rate during all compliance testing shall be no less than 90% of the production rate listed in this AO. If the maximum AO allowable production rate has not been achieved at the time of the test, the following procedure shall be followed:

- 1) Testing shall be at no less than 90% of the production rate achieved to date.

- 2) If the test is passed, the new maximum allowable production rate shall be 110% of the tested achieved rate, but not more than the maximum allowable production rate. This new allowable maximum production rate shall remain in effect until successfully tested at a higher rate.
- 3) The owner/operator shall request a higher production rate when necessary. Testing at no less than 90% of the higher rate shall be conducted. A new maximum production rate (110% of the new rate) will then be allowed if the test is successful. This process may be repeated until the maximum AO production rate is achieved.

F. Existing Source Operation

For an existing source/emission point, the production rate during all compliance testing shall be no less than 90% of the maximum production achieved in the previous three (3) years.

13. Visible emissions from the following emission points shall not exceed the following values:

- A. All crushers - 15% opacity
- B. All screens - 10% opacity
- C. All conveyor transfer points - 10% opacity
- D. All bin vents - 10% opacity
- E. All baghouses - 10% opacity
- F. All Scrubbers - 15% opacity
- G. All diesel engines - 20% opacity
- H. Conveyor drop points - 20% opacity
- I. All other points - 20% opacity

Opacity observations of emissions from stationary sources shall be conducted in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.

A written record of all opacity observations will be kept and made available to the Executive Secretary or the Executive Secretary's representative.

14. Open Area Limitations

- A. The area disturbed by this operation, which has not been stabilized to prevent wind erosion shall not exceed 7.0 acres.
- B. Control of disturbed or stripped areas shall be required at all times during the operation of the plants per R307-205, UAC.



15. Emission Limitations for Asphalt Plant:
  - A. The asphalt plant shall control particulate emissions using a baghouse as a control device.
  - B. All exhaust from the rotary dryer shall pass through a fabric filter baghouse before being vented to the atmosphere.
  - C. A manometer or magnehelic pressure gauge shall be installed to measure the differential pressure across the fabric filter in the baghouse.
  - D. Static pressure differential across the baghouse shall be between two (2) to six (6) inches of water column, generally.
  - E. The pressure gauges shall be located such that an inspector/operator can safely read the indicator at any time.
  - F. The reading shall be accurate to within plus or minus 1.0 inches water column.
  - G. The instruments shall be calibrated according to the manufactures instructions at least once every 12 months.
  - H. Continuous or intermittent recording of the reading is not required.
  - I. Daily records of readings shall be maintained.
16. The amount of recycled asphalt used in each plant shall not exceed 40% of the total product at any time. Compliance shall be determined by the actual hourly production of the plant divided by the hourly amount of recycled product introduced to the plant. Daily records maintained on site shall include:
  - A. Total production
  - B. Amount of recycled asphalt used in the total production
  - C. Daily calculations of the percent recycled asphalt used in the total production
17. The following production and/or consumption limits shall not be exceeded:
  - A. 500,000 tons of material Granite Construction Company produces from its Aggregate Plant per rolling 12-month period
  - B. 300,000 tons of material Granite Construction Company produces from its Asphalt Plant per rolling 12-month period
  - C. 600 tons of material Granite Construction Company produces from its Aggregate Plant per hour based on a 24-hour average
  - D. 400 tons of material Granite Construction Company produces from its Asphalt Plant per hour based on a 24-hour average

- E. 1,500 hours of operation on the 1,250 kW diesel generator per rolling 12-month period
- F. 1,700 hours of operation on the 100 kW diesel generator per rolling 12-month period

To determine compliance with a rolling 12-month total, the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. Production shall be determined by scale house records or vendor receipts. The records of production shall be kept on a daily basis. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log.

### **Roads and Fugitive Dust**

- 18. Granite Construction Company shall abide by a fugitive dust control plan acceptable to the Executive Secretary for control of all dust sources associated with the Plant. Granite Construction Company shall submit a fugitive dust control plan to the Executive Secretary, attention: Compliance Section, for approval within 30 days of the date of this AO. All unpaved roads and other unpaved operational areas that are used by mobile equipment shall be water sprayed and/or chemically treated to control fugitive dust. Treatment shall be of sufficient frequency and quantity to maintain the surface material in a damp/moist condition unless the temperature is below freezing. The opacity shall not exceed 20% during all times the areas are in use. Records of water treatment shall be kept for all periods when the plant is in operation. If chemical treatment is to be used, the plan must be approved by the Executive Secretary. The records shall include the following items:
  - A. Date
  - B. Number of treatments made, dilution ratio, and quantity
  - C. Rainfall received, if any, and approximate amount
  - D. Time of day treatments were made
  - E. Records of temperature if the temperature is below freezing

Records of treatment shall be made available to the Executive Secretary or Executive Secretary's representative upon request and the records shall include the two-year period prior to the date of the request.

- 19. Granite Construction Company shall abide by all applicable requirements of R307-205 for Fugitive Emission and Fugitive Dust sources.
- 20. The speed of mobile equipment (trucks, front end loaders, etc.) shall not exceed 10 miles per hour. The haul road speed shall be posted, at a minimum, on site at the beginning of the haul road so that it is clearly visible from the haul road.
- 21. Visible fugitive dust emissions from haul-road traffic and mobile equipment in operational areas shall not exceed 20% opacity. Visible emission determinations for traffic sources shall use procedures similar to Method 9. The normal requirement for observations to be

made at 15-second intervals over a six-minute period, however, shall not apply. Six points, distributed along the length of the haul road or in the operational area, shall be chosen by the Executive Secretary or the Executive Secretary's representative. An opacity reading shall be made at each point when a vehicle passes the selected points. Opacity readings shall be made 1/2 vehicle length or greater behind the vehicle and at approximately 1/2 the height of the vehicle or greater. The accumulated six readings shall be averaged for the compliance value.

22. Water sprays or chemical dust suppression sprays shall be installed at the following points to control fugitive emissions:
  - A. All crushers
  - B. All screens
  - C. All unenclosed conveyor transfer points\*

\*Enclosed is defined as having three (3) or more sides. The sprays shall operate when necessary, to ensure that the opacity limitations of this AO are not exceeded.

### **Fuels**

23. The owner/operator shall use diesel fuel as a primary fuel for the generators. The approved fuel for the rotary dryer shall be on specification used oil. Both fuels shall meet the requirements stated in the following condition of this AO.
24. The sulfur content of any fuel oil or diesel burned shall not exceed:
  - A. 0.50 percent by weight for fuels used in the asphalt plant
  - B. 5 ppm for diesel fuels consumed in all other equipment

The sulfur content shall be determined by ASTM Method D-4294-89 or approved equivalent. Certification of used oil or other fuels shall be either by Granite Construction Company's own testing or test reports from the used oil fuel or other fuels marketer.

25. Sources burning used oil for energy recovery shall comply with the following:
  - A. The concentrations/parameters of the contaminants in any used oil fuel shall not exceed the following levels:
    - 1) Arsenic .....5 ppm by weight
    - 2) Cadmium.....2 ppm by weight
    - 3) Chromium .....10 ppm by weight
    - 4) Lead .....100 ppm by weight
    - 5) Total Halogens .....1,000 ppm by weight
    - 6) Sulfur .....0.5 percent by weight

- B. The flash point of all used oil to be burned is at least 100 degrees Fahrenheit.
- C. The owner/operator shall provide test certification for each load of used oil fuel received. Certification shall be either by their own testing or test reports from the used oil fuel marketer. Records of used oil fuel consumption and test reports shall be kept for all periods when the plant is in operation. Records shall be kept on site and made available to the Executive Secretary or the Executive Secretary's representative upon request. The records shall include the three-year period prior to the date of the request.
- D. Used oil that does not exceed any of the listed contaminants content may be burned. The owner/operator shall record the quantities of oil burned on a daily basis.
- E. Any used oil fuel that contains more than 1,000 ppm by weight of total halogens shall be considered a hazardous waste and shall not be burned in the rotary dryer. The oil shall be tested for halogen content by ASTM Method D-808-81, EPA Method 8240 or Method 8260 before used oil fuel is transferred to the rotary dryer and burned.
- F. Sources utilizing used oil as a fuel shall comply with the State Division of Solid and Hazardous Waste in accordance with R315-15, UAC.

#### **Federal Limitations and Requirements**

- 26. In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, NSPS Subpart A, 40 CFR 60.1 to 60.18 (General Provisions); Subpart I, 40 CFR 60.90 to 60.93 (Standards of Performance for Hot Mix Asphalt Facilities); and Subpart OOO, 40 CFR 60.670 to 60.676 (Standards of Performance for Nonmetallic Mineral Processing Plants) apply to this installation.

#### **Records & Miscellaneous**

- 27. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on the information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on the equipment authorized by this AO shall be recorded.
- 28. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.
- 29. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the DAQ. The UAC R307 rules used by DAQ, the NOI guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

<http://www.airquality.utah.gov/>

The annual emissions estimations below include point source, fugitive emissions, fugitive dust, and road dust. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, Maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential To Emit (PTE) emissions for this are currently calculated at the following values:

	<u>Pollutant</u>	<u>Tons/yr</u>
A.	PM <sub>10</sub> .....	9.38
B.	SO <sub>2</sub> .....	8.72
C.	NO <sub>x</sub> .....	29.76
D.	CO .....	25.28
E.	VOC .....	7.68
F.	HAPs	
	Formaldehyde .....	0.0017
	Xylene.....	0.0018
	Benzene .....	0.0025
	Toluene .....	0.0015
	Total HAPs .....	0.01

The DAQ is authorized to charge a fee for reimbursement of the actual costs incurred in the issuance of an AO. An invoice will follow upon issuance of the final AO.

Sincerely,

John T. Blanchard, Manager  
Minor New Source Review Section